UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,007	09/30/2003	Jaya L. Jeyaseelan	80107.075US1	4850

7590 03/08/2007 LeMoine Patent Services, PLLC c/o PortfolioIP P.O. Box 52050 Minneapolis, MN 55402	**EXAMINER** SMITH, SHEILA B

ART UNIT	PAPER NUMBER
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 October 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tran (U.S.

Patent Number 7,065,063) in view of Wiedeman et al. (U.S. Patent Number 6,233,463).

Regarding claim 1, Tran discloses essentially all the claimed invention as set fourth in

the instant application, further Tran discloses system and method for balancing communication

traffic loading between adjacent base stations in a mobile communications network. In addition

Tran discloses a method comprising: determining a metric representing a quality of a current

association between a wireless network client and an access point (which reads on column 2

lines 49-60), comparing a metric against a threshold (which reads on column 3 lines 15-20); and

setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines

35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial

mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a

delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the

invention was made to modify the reference Tran with setting a delay timer as taught by

Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 2, Tran discloses essentially all the claimed invention as set fourth in the instant application, further Tran discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a received signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 3, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a current data rate (which reads on column 2 lines 7-32).

Regarding claim 4, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a number of packet retries (which reads on column 2 lines 7-32).

Regarding claim 5, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a comparing a plurality of metrics against a plurality of thresholds, and setting the timer in response (which reads on t column 2 lines 7-32).

Regarding claim 6, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a received signal strength indicator, and the threshold is dependent on the current data rate (which reads on column 2 lines 7-32).

Regarding claim 7, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a method comprising setting a timer to one of a plurality of values for roaming attempt by a mobile station in a wireless network, wherein the mobile station attempts to roam after the timer expires (which reads on column 10 lines 40-42). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 8, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a timer comprises comparing at least one metric to at least one threshold, and setting the timer in response (which reads on column 2 lines 7-32).

Regarding claim 9, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the value to which the timer is set is influenced by a perceived quality of a current association (which reads on column 2 lines 7-32).

Regarding claim 10, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the perceived quality of the current association is relatively low, the timer is set to a value that is relatively low (which reads on column 2 lines 7-32).

Regarding claim 11, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the perceived quality of the current association is relatively high, the timer is set to a value that is relatively high (which reads on column 2 lines 7-32).

Regarding claim 12, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a timer comprises setting a hardware timer (which reads on column 2 lines 7-32).

Regarding claim 13, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses setting a timer comprises setting a software timer (which reads on column 2 lines 7-32).

Regarding claim 14, Tran discloses essentially all the claimed invention as set fourth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses a method comprising: comparing a first metric representing a quality of a current

association between a wireless network client and an access point (which reads on column 2

lines 49-60), comparing a metric against a threshold (which reads on column 3 lines 15-20); and

setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines

35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial

mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a

delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the

invention was made to modify the reference Tran with setting a delay timer as taught by

Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 15, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the first metric comprises a data rate

(which reads on column 2 lines 7-32).

Regarding claim 16, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses first threshold corresponds to the

lowest possible data rate (which reads on column 2 lines 7-32).

Regarding claim 17, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the second metric comprises a received

signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 18, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the second threshold is dependent on the current data rate (which reads on column 2 lines 7-32).

Regarding claim 19, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the second value is larger than the first value (which reads on column 2 lines 7-32).

Regarding claim 20, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses comparing a percentage of missed beacons to a threshold, and conditionally attempting to roam in response (which reads on column 2 lines 7-32).

Regarding claim 21, Tran discloses essentially all the claimed invention as set fourth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses a apparatus including a medium adapted to hold machine assessable instructions (which reads on a mobile phone) that when accessed result in a machine performing comparing a first metric representing a quality of a current association between a wireless network client and an access point (which reads on column 2 lines 49-60), comparing a metric against a threshold (which reads on column 3 lines 15-20); and setting a timer for roaming attempt by a wireless

network client (which reads on column 4 lines 35-51). However, Tran fails to specifically

disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial

mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a

delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the

invention was made to modify the reference Tran with setting a delay timer as taught by

Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 22, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the first metric comprises a data rate

(which reads on column 2 lines 7-32).

Regarding claim 23, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the first threshold corresponds to the

lowest possible data rate (which reads on column 2 lines 7-32).

Regarding claim 24 TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the second metric comprises a received

signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 25, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses a apparatus comprising: a radio

interface to interact with a wireless network; and a processor coupled to the radio interface,

wherein the processor is adapted to set a timer based on a perceived quality of a current

association, and further adapted to attempt roaming when the timer expires (which reads on

column 2 lines 7-32).

Regarding claim 26, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the timer is at least partially

implemented in hardware (which reads on column 2 lines 7-32).

Regarding claim 27, TRAN discloses essentially all the claimed invention as set fourth in

the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the timer is at least partially

implemented in software (which reads on column 2 lines 7-32).

Regarding claim 28, Tran discloses essentially all the claimed invention as set fourth in

the instant application, further Tran discloses system and method for balancing communication

traffic loading between adjacent base stations in a mobile communications network. In addition

Tran discloses a electronic system comprising an omni-directional antenna (35) a radio interface

(32) coupled to the omni-directional antenna (35) to interact with a wireless network and a

processor (34) coupled to the radio interface wherein the processor (which is exhibited in figure

2) is adapted to a timer based on a metric representing a quality of a current association between

a wireless network client and an access point (which reads on column 2 lines 49-60), comparing

a metric against a threshold (which reads on column 3 lines 15-20); and setting a timer for

roaming attempt by a wireless network client (which reads on column 4 lines 35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 29, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in hardware (which reads on column 2 lines 7-32).

Regarding claim 30, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in software (which reads on column 2 lines 7-32).

Response to Arguments

2.   Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.
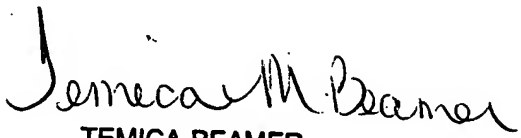
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (571)272-7847. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Smith
March 5, 2007

TEMICA BEAMER
PRIMARY EXAMINER